Summary

Game of Life (Wikipedia) is a cellular automation that consists of a collection of adjacent cells that have one of two states, dead or alive. The cells operate according to the following rules:

1. A cell dies if it has fewer than 2 live neighbors to simulate underpopulation. (A neighbor is any one of the 8 surrounding cells.)
2. A cell with 2 or 3 live neighbors stays alive.
3. A cell with more than 3 live neighbors dies to simulate overpopulation.
4. A dead cell with exactly 3 live neighbors becomes a live cell to simulate reproduction.

Development

I originally wrote a command line application in C for one of my classes in school and decided that it would be a fun project to make a GUI for with Objective-C and Interface Builder.

In the future I hope to modify the application to simulate fish and sharks in the ocean. Cells would be different colors to indicate what sea creature was occupying it. I would also like to animate the cells to pulse and look more fluid as the simulation runs.

Another change I would like to make is to change the buttons to a darker color to match the HUD style background.

Try it out!

There are a number of interesting shapes that arise in Game of Life. One of them is known as a glider. With the animation paused, perform the following steps:

1. Click the “Clear” button.
2. In the center of the grid, click on cells to create the shape show on the right.
3. Click the “Play” button to watch the glider make its way across the screen. When it gets to the edge, it wraps around and keeps going.
4. Adjust the speed up or down to make the glider go faster or slower.